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A HISTORY OF THE PROGRESS OF THE SUGAR INDUSTRY OF HAWAII SINCE THE RECIPROCITY TREATY OF 1876

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THE SCOPE of this history is so broad, and the material to draw upon so limited, that better results would undoubtedly have been obtained had the work been undertaken by one who has been longer identified with the sugar industry, and, through personal familiarity with the subject, more capable of writing its history. So many extraneous causes have stimulated, or at times depressed, the sugar industry of the islands, and so many elements have entered into the increase of production itself, that it was somewhat of a problem, after getting in hand all available information, to know just where to begin.

We will first trace the general development of the industry along the lines of production and acreage, and will then take up the various causes leading to the increase of production and stimulating the industry, with a brief and general account of the progress made in its various branches.

ACREAGE AND PRODUCTION.

Previous to 1882 there was no organization of the sugar planters of the islands, and there is very little in the nature of statistics relating to the industry during the years between that time and the establishment of the first sugar plantation on a commercial basis.

Although this history does not undertake to go farther back than the date of the granting of the reciprocity treaty by the United States, as a matter of general interest there is shown in the following table the exports of sugar and molasses from the Hawaiian Islands from 1837 to 1876:—

Yearly Exports of Sugar and Molasses From the Hawaiian Islands Since 1837—Its First Year of Exportation.

Year.	Sugar, Lbs.	Molasses Gallons.
1837	4,286	2,700
1838	88,543	11,500
1839	100,000	75,000
1840	360,000	31,729
1841	60,000	6,000
1842
1843	1,145,010	64,320
1844	513,684	27,026
1845	302,114	19,353
1846	300,000	16,000
1847	594,816	17,923
1848	499,533	28,978
1849	653,820	41,235
1850	750,238	129,432
1851	21,030	43,742
1852	699,170	62,030
1853	642,746	75,769
1854	575,777	68,372
1855	289,908	38,304
1856	554,805	58,842
1857	790,556	48,486
1858	1,204,061	75,181
1859	1,826,620	87,513
1860	1,444,271	108,613
1861	2,562,498	128,259
1862	3,005,603	130,445
1863	5,292,121	114,413
1864	10,414,441	340,436
1865	15,318,097	542,819
1866	17,729,161	851,795
1867	17,127,187	544,994
1868	18,312,926	492,839
1869	18,302,110	338,311
1870	18,783,659	216,662
1871	21,760,773	271,291
1872	16,995,402	192,105
1873	23,129,101	146,459
1874	24,566,611	90,060
1875	25,080,182	93,722
1876	26,072,429	139,073

(*) These figures are from January to August only, while for 1841 (†) the figures are from August, 1840, to August, 1841. (†) No figures for this year, but the figures of the following year doubtless include both.

The following table shows the production of sugar in the Hawaiian Islands as a whole from 1877 to 1891, at which time the Hawaiian Sugar Planters' Association began issuing detailed statistics of production.

Years.	Quantity Lbs.
1877	25,575,965
1878	38,431,458
1879	49,020,972
1880	63,584,871
1881	93,789,483
1882	114,177,938
1883	114,107,155
1884	142,654,923
1885	171,350,314
1886	216,223,615
1887	212,763,647
1888	235,888,346
1889	242,165,835
1890	259,789,462
1891	274,983,580

From 1891 to 1907 the production by islands is shown by the following table:

that this was the largest average yield per acre that the islands were capable of producing in an ordinary season, and it was improbable that the future sugar crop would much exceed the total, at least for some years.

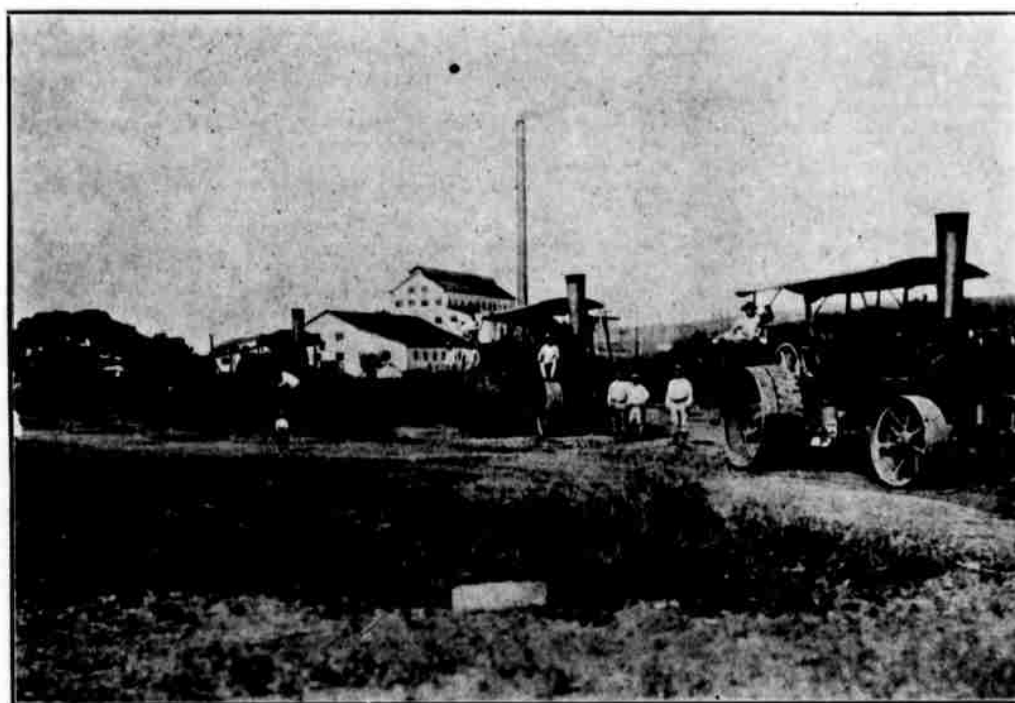
In 1889 the total number of acres under cultivation in the islands was shown as follows:

	Plant Cane.	Ratoons.	Total.
Hawaii	21,960	13,912	35,872
Maui	8,097	3,320	11,417
Kauai	5,744	4,009	9,753
Oahu	2,072	1,523	3,595
Molokai	75	75	150

Total area under cultivation 37,948 22,839 61,787

Oahu.

Year.	Acres.	Tons of Sugar.	Yield per Acre, Lbs.
1897	5,368.5	28,929.	10,777
1898	5,373.14	34,181.	12,723
1899	6,233.	45,820.	14,702
1900	7,265.5	53,625.	14,761
1901	13,562.	98,897.	14,584
1902	15,183.	107,770.	14,196
1903	16,684.	121,066.	14,513
1904	15,832.	102,019.78	12,888
1905	18,782.84	123,094.76	13,107
1906	18,178.	113,363.2	12,473
1907	18,994.64	119,272.46	12,559



Steam Plow Engines, With the Mill in the Background, of the Koloa Sugar Company on the Island of Kauai.

Year	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
Hawaii	76,866	58,551	57,078	72,199	61,643	109,299	126,736	91,606	117,239
Maui	36,110	28,390	32,670	33,689	27,735	29,097	41,047	45,033	54,389
Oahu	8,979	10,695	19,864	18,843	17,433	35,782	28,929	34,181	45,820
Kauai	24,219	24,643	43,009	41,704	42,816	51,650	54,414	58,594	65,359
Total	146,174	122,279	152,621	166,432	149,627	225,828	251,126	229,414	282,807

Year	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Hawaii	115,224	134,618	121,295	170,665	122,865	126,405	137,750	143,891
Maui	57,347	58,349	56,726	84,776	77,985	100,434	102,960	104,772
Oahu	53,625	99,534	107,870	121,066	102,019	123,095	113,750	119,273
Kauai	63,348	67,537	69,720	61,484	64,606	76,314	74,753	72,081
Total	289,544	360,038	355,611	437,991	367,475	426,248	429,213	440,017

It may be noted in this connection that the small quantity of sugar produced at Molokai by the Kamalo Sugar Company and by R. W. Myer and perhaps others, is not included in the above, but this amount I believe is relatively very small, and the statistics of yields are not available.

Average Yield. From 1835 up to say 1850-1855, with the methods of cultivation then in vogue and with the use of the most primitive mill apparatus, it was considered that one ton of sugar per acre was a fair average yield.

In 1882, there then being upwards of sixty mills in operation, a statement of production and acres harvested was obtained from each plantation with the following result:

	Acres.	Tons (3000 lbs.).
Island of Hawaii	11,260	28,734
Island of Maui	5,937	13,482
Island of Kauai	3,459	11,671
Island of Oahu	1,779	4,764
Island of Molokai	259	473
Totals	21,894	59,124

This gives an average yield per acre of 2.71 tons of sugar. It was stated at that time

The yield from the area actually harvested is not given with the foregoing figures, and they are interesting only as showing the steady enlargement of the area under cultivation in sugar.

It appears that during these years (1882-1889) a yield of 3 to 3½ tons per acre from plant cane and 2 tons an acre from ratoons was considered a very good average.

No systematic attempt to record areas harvested and production thereof was made until after the beginning of the Experiment Station conducted by the Planters' Labor & Supply Company. In the year 1897 this Station inaugurated a system of returns from the plantations showing acreage and production, from which have been compiled the following tables. In some instances the totals of production are at variance with those shown above, but this is to be accounted for by the different manner in which returns are made to the Experiment Station and to the Secretary of the H. S. P. A.

Kauai.

Year.	Acres.	Tons of Sugar.	Yield per Acre, Lbs.
1897	9,714.	54,414.	11,203
1898	10,864.	58,594.	10,787
1899	11,109.	65,359.	11,767
1900	11,862.	63,348.	10,681
1901	12,896.	67,205.	10,423
1902	14,320.	69,694.	9,774
1903	13,291.	61,484.	9,252
1904	14,959.15	64,603.47	8,637
1905	16,541.82	76,313.42	9,227
1906	17,096.	74,787.7	8,749
1907	16,289.49	72,194.68	8,864

Maui.

Year.	Acres.	Tons of Sugar.	Yield per Acre, Lbs.
1897	8,693.5	41,047.	9,443
1898	8,269.5	45,033.	10,891
1899	9,295.75	54,389.	11,702
1900	10,425.	57,347.	11,002
1901	11,400.	58,349.	10,237
1902	11,920.	56,616.	9,499
1903	14,625.	84,776.	11,593
1904	13,948.8	77,926.	11,173
1905	15,116.46	100,433.77	13,288
1906	15,971.4	102,961.60	12,893
1907	16,724.5	104,772.47	12,529

Hawaii.

Year.	Acres.	Tons of Sugar.	Yield per Acre, Lbs.
1897	30,107.	126,736.	8,419
1898	30,728.5	91,606.	5,962
1899	33,671.	117,239.	6,963
1900	34,264.	115,224.	6,726
1901	40,760.	134,682.	6,608
1902	39,531.	119,870.	6,064
1903	48,750.	170,728.	7,004
1904	47,057.670	122,855.54	5,281
1905	45,002.390	127,523.73	5,667
1906	44,984.000	139,255.7	6,191
1907	47,907.370	144,694.55	6,041